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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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PPG INDUSTRIES INC
INTELLECTUAL PROPERTY DEPT
ONE PPG PLACE
PITTSBURGH, PA 15272

EXAMINER

FLETCHER III, WILLIAM P

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 10/17/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,805

Applicant(s)

CASPER, JAMES WILLIAM

Examiner

William P. Fletcher III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. In view of the appeal brief filed on 07/18/2003 (Paper No. 16), PROSECUTION IS HEREBY REOPENED. New grounds of rejection set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. Applicant's arguments, see the appeal brief, filed 07/18/2003 (Paper No. 16), with respect to the rejections set-forth in Paper No. 8, have been fully considered and are persuasive. Accordingly, these rejections have been withdrawn.

Specification

3. The abstract of the disclosure is objected to because it consists of more than one paragraph. Correction is required. See MPEP § 608.01(b).

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

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The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the *claims* are directed.

The following title is suggested: SOLVENT-BORNE PAINT PACK, ACTIVATED SOLVENT-BORNE PAINT PACK, WATER-BORNE COATING COMPOSITION CONTAINING ACTIVATED PAINT PACK, PROCESS FOR PRODUCING THESE, AND PROCESS FOR COATING A SUBSTRATE WITH THE WATER-BORNE COATING COMPOSITION.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. **Claims 1 – 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1 and 20 recite that the paint pack is "non crosslinker containing." This limitation was introduced in the amendment of 08/15/2003 (Paper No. 7) and is not supported by the originally-filed disclosure. Nowhere in the originally-filed disclosure is the presence/absence of a cross-linker addressed. Further, the examiner notes it has been held that negative limitations, which did not appear in the specification as-filed, introduce new concepts and violate the

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description requirement of 35 U.S.C. 112. *Ex parte Grasselli et al.*, 231 USPQ 393 (BdPatApp&Int 1983): "It might be added that the express exclusion of certain elements implies the permissible inclusion of all other elements not so expressly excluded. This clearly illustrates that such negative limitations do, in fact, introduce new concepts."

Additionally, claim 20 recites "in the presence of a pigment dispersant in the polymer solution." This limitation was also introduced in the amendment of 08/15/2003 (Paper No. 7) and is not supported by the originally-filed disclosure. Nowhere in the originally-filed disclosure is a pigment dispersant discussed.

All other pending claims depend either directly or indirectly from claims 1 and 20. As such, they incorporate the subject matter thereof and are also rejected under this heading.

In traversing this rejection, applicant is *required* to explicitly cite those portions of the originally-filed disclosure which applicant contends supports the limitations in question.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 16 – 19 and 21 – 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 16 and 21 refer to paint packs containing cross-linkers prepared according to the method of their respective independent claims. The independent claims recite preparing "non crosslinker containing" paint packs. While the examiner appreciates the distinction between a paint pack and an "activated" paint pack (i.e., the latter is the former plus a cross-linker), reference back to the independent claims which explicitly excludes cross-linkers makes it

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difficult to determine whether or not a cross-linker is present. These claims are, consequently, indefinite.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 1 – 6, and 8 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schimmel et al. (US 5,585,427 A) in view of Benefiel et al. (US 3,693,147 A).**

Schimmel teaches a composition in which a water-borne pigment dispersion, comprising pigment dispersed in water, is dispersed in a solution of a polymer in an organic solvent [abstract; c. 7, l. 30 – c. 12, l. 58]. Non-limiting examples of the polymer are: acrylic, polystyrene, acrylonitrile, polyester, epoxy, polyamide, aminoplast, and polyurethane polymers [c. 10, ll. 36 – 42].

Schimmel does not explicitly state that the polymer has functional groups and hydrophilic groups.

Benefiel teaches a carboxy-hydroxy acrylic copolymer as a binder for a pigmented coating composition [c. 2, l. 62 – c. 4, l. 15]. Such a binder advantageously gives control over pigment orientation and dispersion [c. 6, ll. 37 – 64].

Since Schimmel gives, as an example of the polymer, an acrylic polymer, but does not give further detail, one of ordinary skill in the art would have looked to the prior art for teachings of suitable acrylic resins. In view of the teaching of Benefiel, it would have been obvious to one

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of ordinary skill in the art to select, as the acrylic resin, a carboxy-hydroxy resin, as suggested by Benefiel. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of greater control over pigment dispersion and orientation in the composition.

Carboxyl groups and hydroxyl groups read on functional and hydrophilic groups, respectively, as these groups are defined by applicant at pp. 4 – 5 of the spec.

The composition of Schimmel may also contain (i.e., it is not required) a cross-linker, a specific example of which is isocyanate [c. 10, ll. 10 – 50 – 55]. Schimmel does not distinguish an activated composition from a non-activated one, but does encourage the packaging of the coating composition in separate components. It is well-known in the coating art to keep mutually reactive binder and cross-linker components of a coating composition separate prior to application. Doing so prevents increases storage life by preventing premature cross-linking. Consequently, it would have been obvious to store the binder portion separate from the cross-linker and to add the cross-linker to the binder prior to coating (thereby forming an “activated” composition). Further, the composition of Schimmel is coated onto a substrate and cured [c. 12, ll. 25 – 58].

Schimmel does not teach any specific acid or OH numbers. Benefiel teaches, however, that various examples of binder resins with acid numbers and OH numbers within applicant’s claimed ranges [see Examples]. Consequently, it would have been obvious to one of ordinary skill in the art to utilize carboxy-hydroxy resins with these physical properties. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of utilizing a polymer with physical properties suitable for preparing the composition of Schimmel.

With respect to claims 13 and 14, the molecular weight of a polymer is a physical property that it is well known to adjust in the preparation of coating compositions because molecular weight is a result-effective property, effecting properties of the composition such as viscosity and flowability. Absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed molecular weight ranges, it would have been obvious to one of ordinary skill in the art to optimize such a result-effective variable by routine experimentation [see MPEP § 2144.05(II)].

With respect to claims 10 – 12, it is well-known to prepare acrylic polymers from vinyl monomers and it would have been obvious to do so. As to the T_g values claimed, these are also physical properties that are result-effective, effecting the flowability and curing of the composition. Absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed molecular weight ranges, it would have been obvious to one of ordinary skill in the art to optimize such a result-effective variable by routine experimentation [see MPEP § 2144.05(II)].

Allowable Subject Matter

12. Claims 7 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: The prior art neither teaches nor suggests the composition of claim 1 in which the hydrophilic groups are amine groups.

Conclusion

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14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4,363,887 A teaches a water-in-oil coating emulsion.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (703) 308-7956. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (703) 308-2333. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

WPF 10/01/2003
William P. Fletcher III
Examiner
Art Unit 1762


SHRIVE P. BECK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700